

URGENT

Work Order ID 103381

103381

Page 1

June 24-13 11:11:18 AM

Item ID: D4543-2

Accept

N9000040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Retainer, Outer, RH

Start Date: 6/24/13 Start Qty: 20.00

20

Cust Item ID:

Required Date: 6/25/13 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan: U

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N): ✓

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D4543

B

100

0.00

100

Waterjet

Memo

0.00

FLOW CNC Waterjet

1- Cut D4543-1F as per dwg

Prog rev: B

Dwg rev: B

2- Deburr

20 ϕ Ac
13.06.24

PTO →

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

20.15 ϕ Ac
13.06.24

~~~~~

62

DQA:

Date: 13/08/06



QA Closed:

Date: 13/7/24

## WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only

☐

| Work Order: 103381<br>Part No. D4543-2<br>NCR No. 13-2879                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>DISPOSITION</b><br>Rework <input type="checkbox"/><br>Scrap <input checked="" type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                     | <b>AGAINST DEPARTMENT/PROCESS</b><br>Skid-tube <input type="checkbox"/><br>Machining <input type="checkbox"/><br>Thermoforming <input type="checkbox"/><br>Large Fab <input type="checkbox"/><br>Crosstube <input type="checkbox"/><br>Small Fab <input type="checkbox"/><br>Finishing <input type="checkbox"/><br>Composite <input type="checkbox"/><br>Water Jet <input checked="" type="checkbox"/><br>Prod. Eng. Coord. <input type="checkbox"/><br>Rec/Store/Packaging <input type="checkbox"/><br>Supplier <input type="checkbox"/><br>Engineering <input type="checkbox"/><br>Quality <input type="checkbox"/><br>Other <input type="checkbox"/> |                            |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Root Cause                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Date     | Step | Qty                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Description of work order update or non-conformance                                                                                                                                       | Initial Chief Eng                   | Action Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Sign & Date                | Verification                                    | QC Inspector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |
| Design <input type="checkbox"/><br>Doc/Data <input type="checkbox"/><br>Equip/Tooling <input checked="" type="checkbox"/><br>Handling/Pre <input type="checkbox"/><br>Material <input type="checkbox"/><br>Operator <input type="checkbox"/><br>Offset/Setup <input type="checkbox"/><br>Process <input type="checkbox"/><br>Supplier <input type="checkbox"/><br>Training <input type="checkbox"/><br>Transport <input type="checkbox"/><br>Unapproved <input type="checkbox"/>                         | 13-06-25 | 100  | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Part got stuck<br>and bent in deburring<br>machine<br><br>RC machin malfunction                                                                                                           | DAS 16<br>9-89<br>Q7202<br>13/06/25 | Scrap + Destroy<br>No Reply<br>\$14.47                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 13-06-25<br>DAS 09<br>9-89 | 13-06-25<br>DAS 16<br>9-89<br>13/06/25<br>Q7202 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |
| FAULT CATEGORY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                           |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |          |      | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function |                                                                                                                                                                                           |                                     | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence                                                                                                                                                     |                            |                                                 | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input checked="" type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |  |  |
| R.C. sensor not working correctly<br>on deburring machine                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                           |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |



# Work Order ID 103381

\*103381\*

Page 2

June-24-13 11:11:18 AM

Item ID: D4543-2 Accept \*N900040100\* Setup Start \*NS1\*  
Revision ID: Stop \*NS2\*  
Item Name: Retainer, Outer, RH  
Start Date: 6/24/13 Start Qty: 20.00 \*20\* Cust Item ID:  
Required Date: 6/25/13 Req'd Qty: 20.00 \*20\* Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description                                                            | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|-------------------------------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 120                            | QC8- Inspect parts - second check                                                   | 0.00                 |         |        |              |               |               |                  |                |
| *120*                          |                                                                                     |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                                                                | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |                                                                                     |                      |         |        |              |               |               |                  |                |
| 130                            |                                                                                     | 0.00                 |         |        |              |               |               |                  |                |
| *130*                          |                                                                                     |                      |         |        |              |               |               |                  |                |
| Small Fab                      | Memo                                                                                | 0.00                 |         |        |              |               |               |                  |                |
| Small Fab                      | FORM ON BEAD ROLLER (DT9787)                                                        |                      |         |        |              |               |               |                  |                |
|                                | ***MAKE ONE AND ENSURE IT'S MADE AS PER DWG BEFORE<br>MAKING QTY REQUIRED ON W/O*** |                      |         |        |              |               |               |                  |                |
| 140                            | QC5- Inspect part completeness to step on W/O                                       | 0.00                 |         |        |              |               |               |                  |                |
| *140*                          |                                                                                     |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                                                                | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |                                                                                     |                      |         |        |              |               |               |                  |                |

19 13-06-25 DAS 09

19 13/06/25

19

13 6 26









June-24-13 11:11:18 AM

Page 4

ML5 1306-27

1000





# Picklist Print

June-24-13 11:11:17 AM

Page 1

Work Order ID: 103381

Parent Item: D4543-2

Parent Item Name: Retainer, Outer, RH

Start Date: 6/24/13

Required Date: 6/25/13

Start Qty: 20.00

Required Qty: 20.00

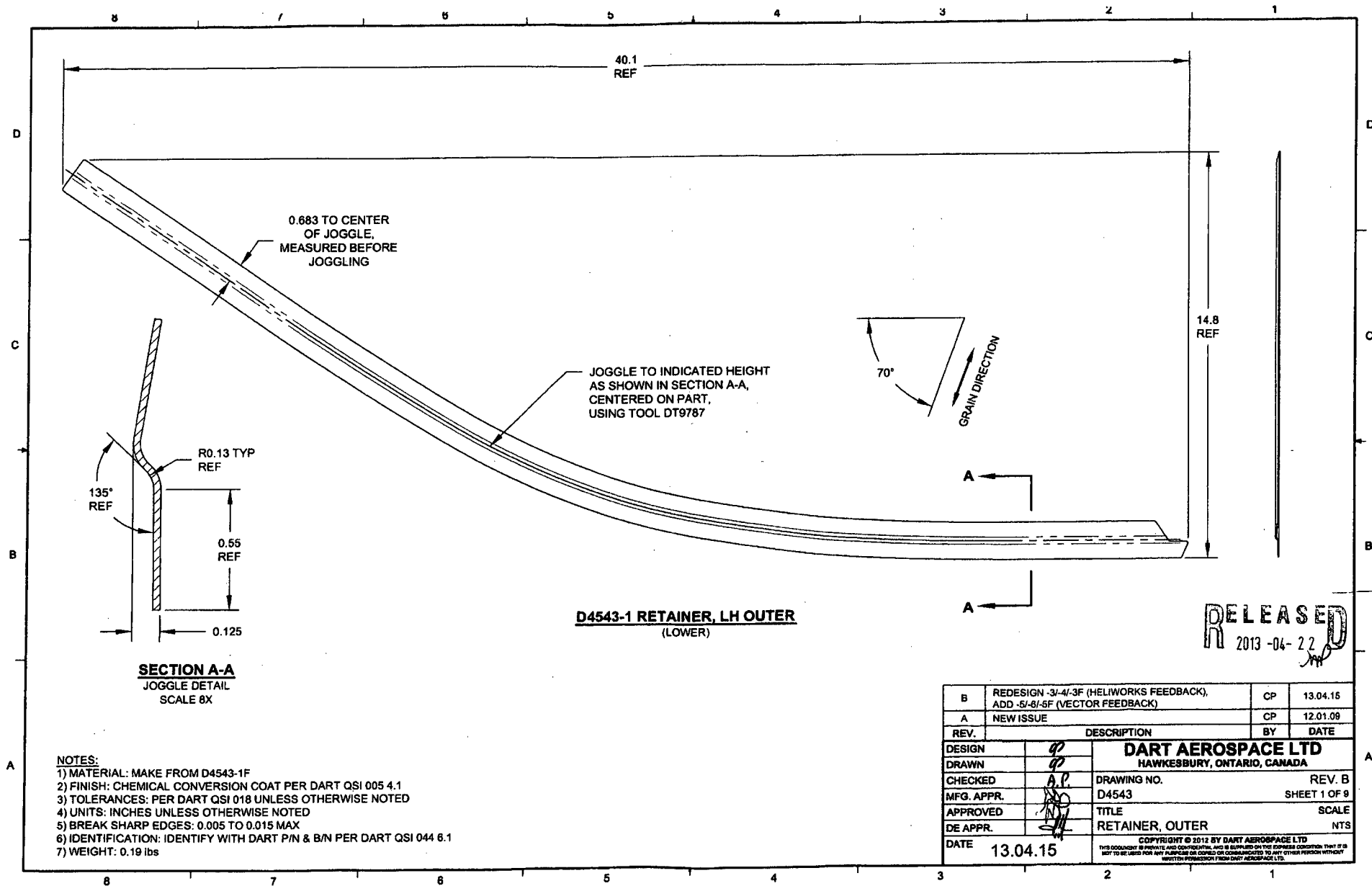
Comments: IPP revA 12.01.12 New Issue EC verified by:DD IPP REV:B 12.02.24 as per dwg  
reva DD verf:EC IPP REV:C 13.04.23 as per dwg revB DD verf:JLM

| Component Item ID/<br>Item Name      | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|--------------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| M6061T6S.032<br>6061-T6 Sheet 0.032" |                        | Purchased     | No          |                     |                  | 100             | sf                 | 742.9000       | 0.611       | 12.863158    |               | 13.06.24       |        |

| Location       | Loc Qty | Loc Code |
|----------------|---------|----------|
| MAT021         | 742.9   |          |
| 123135         | 15      |          |
| 123137         | 10      |          |
| 123293         | 10      |          |
| 123483         | 256.6   |          |
| m125822        | 67.3    |          |
| <u>m126115</u> | 384     |          |

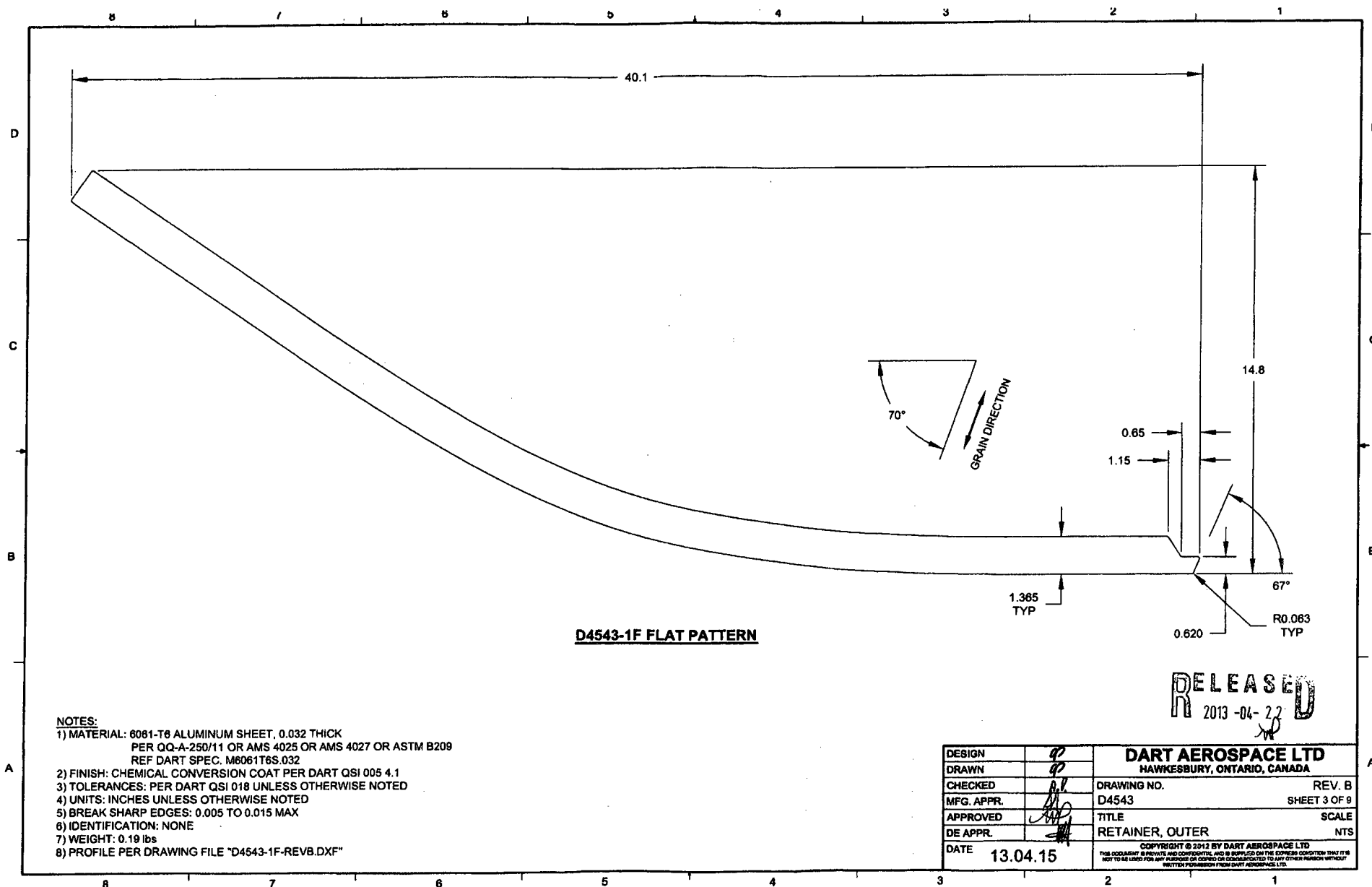
126115











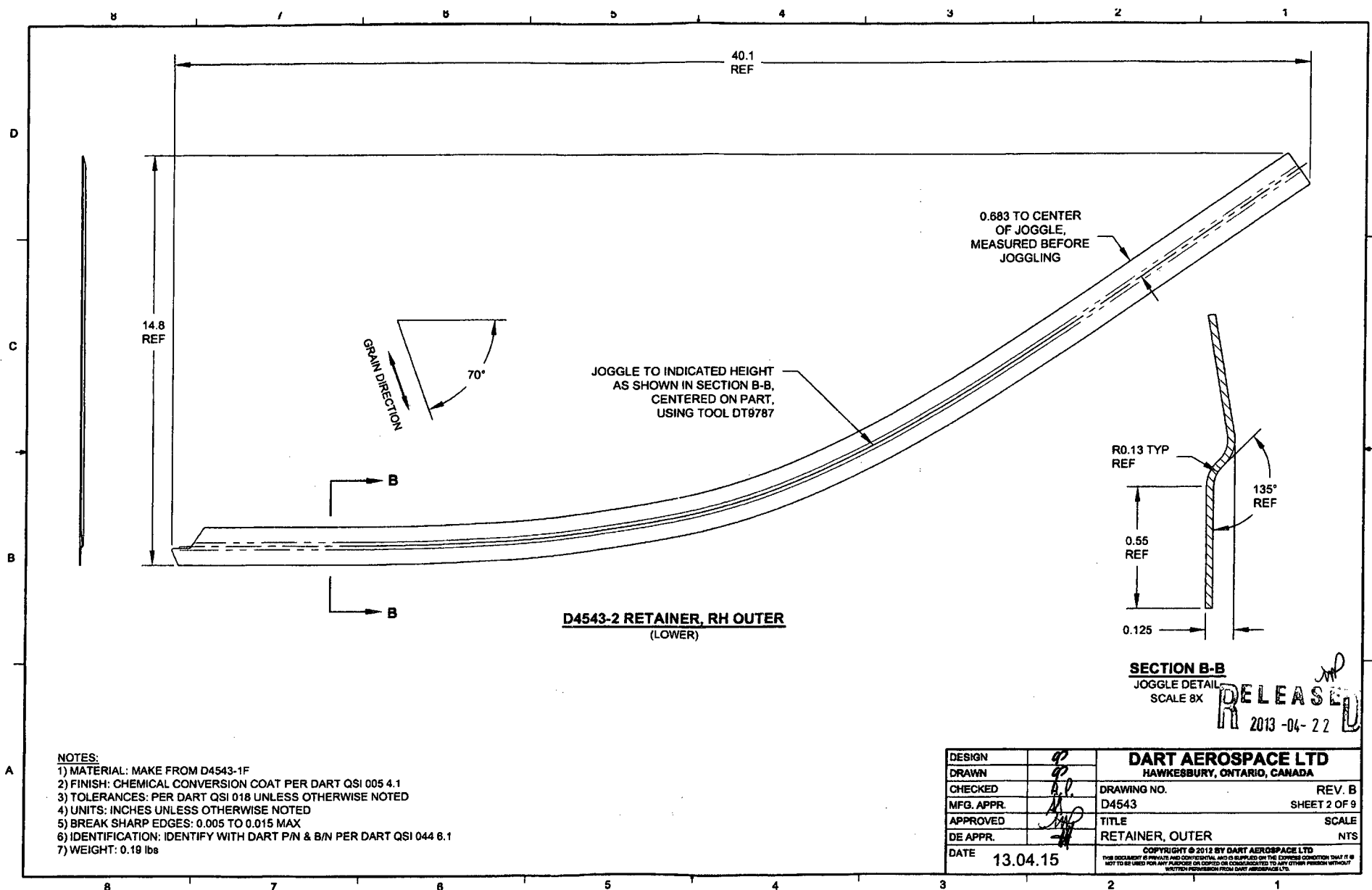
RELEASED  
2013-04-22

**NOTES:**

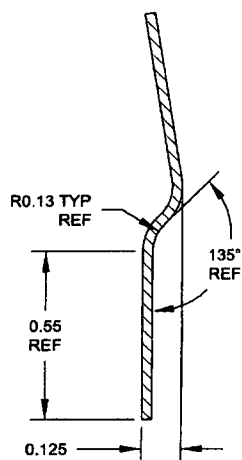
- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK  
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209  
REF DART SPEC. M6061T6S.032
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.19 lbs
- 8) PROFILE PER DRAWING FILE "D4543-1F-REVB.DXF"

|            |          |                                                                                                                                                                                                                                                                                                                                         |              |
|------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | 92       | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                                                                               |              |
| DRAWN      | 92       | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                                                                             |              |
| CHECKED    | 92       | DRAWING NO.                                                                                                                                                                                                                                                                                                                             | REV. B       |
| MFG. APPR. | 92       | D4543                                                                                                                                                                                                                                                                                                                                   | SHEET 3 OF 9 |
| APPROVED   | 92       | TITLE                                                                                                                                                                                                                                                                                                                                   | SCALE        |
| DE APPR.   | 92       | RETAINER, OUTER                                                                                                                                                                                                                                                                                                                         | NTS          |
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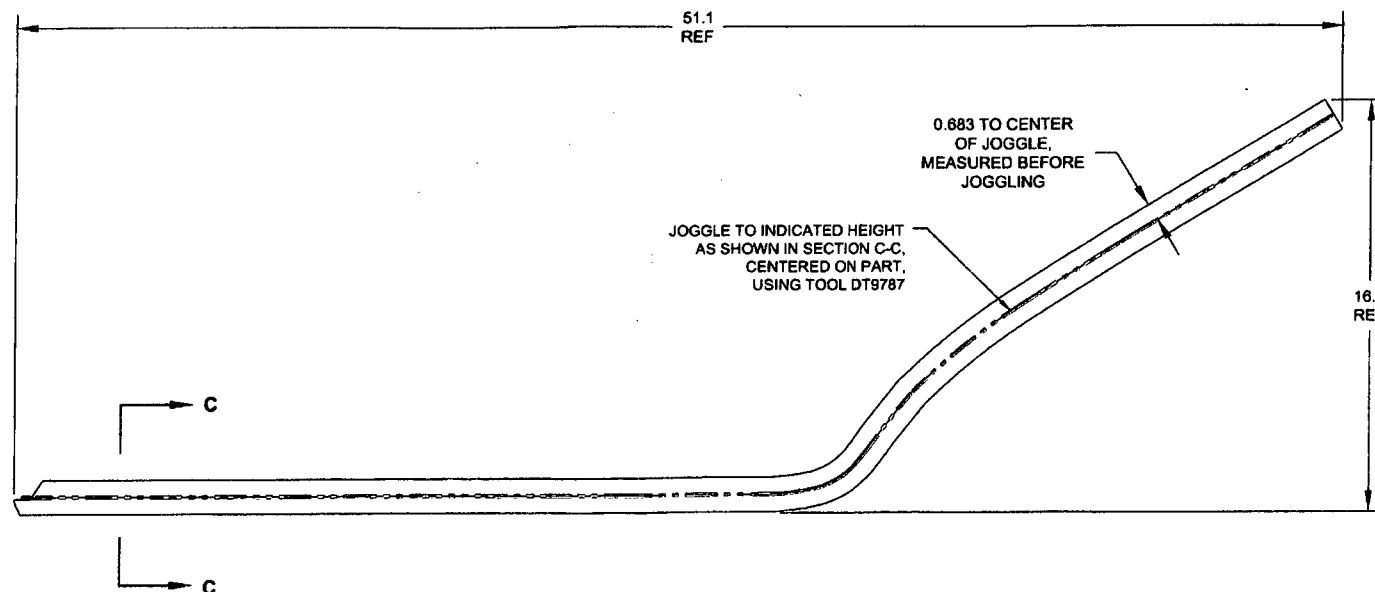








**SECTION C-C**  
JOGGLE DETAIL  
SCALE 12X



**D4543-3 RETAINER, LH OUTER**  
(SIDE/TOP)



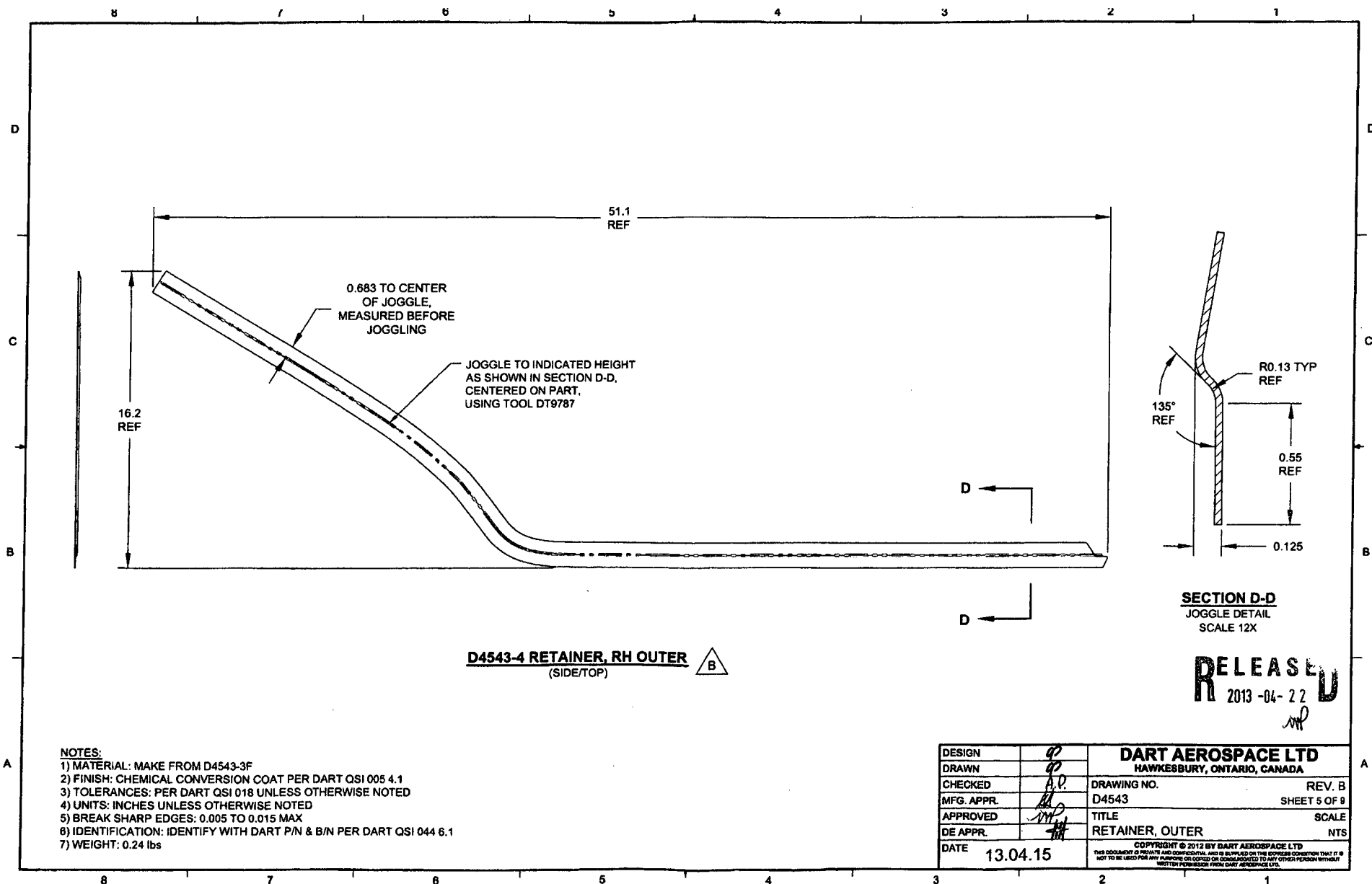
RELEASED  
2013-04-22

**NOTES:**

- 1) MATERIAL: MAKE FROM D4543-3F
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N & B/N PER DART QSI 044 6.1
- 7) WEIGHT: 0.24 lbs

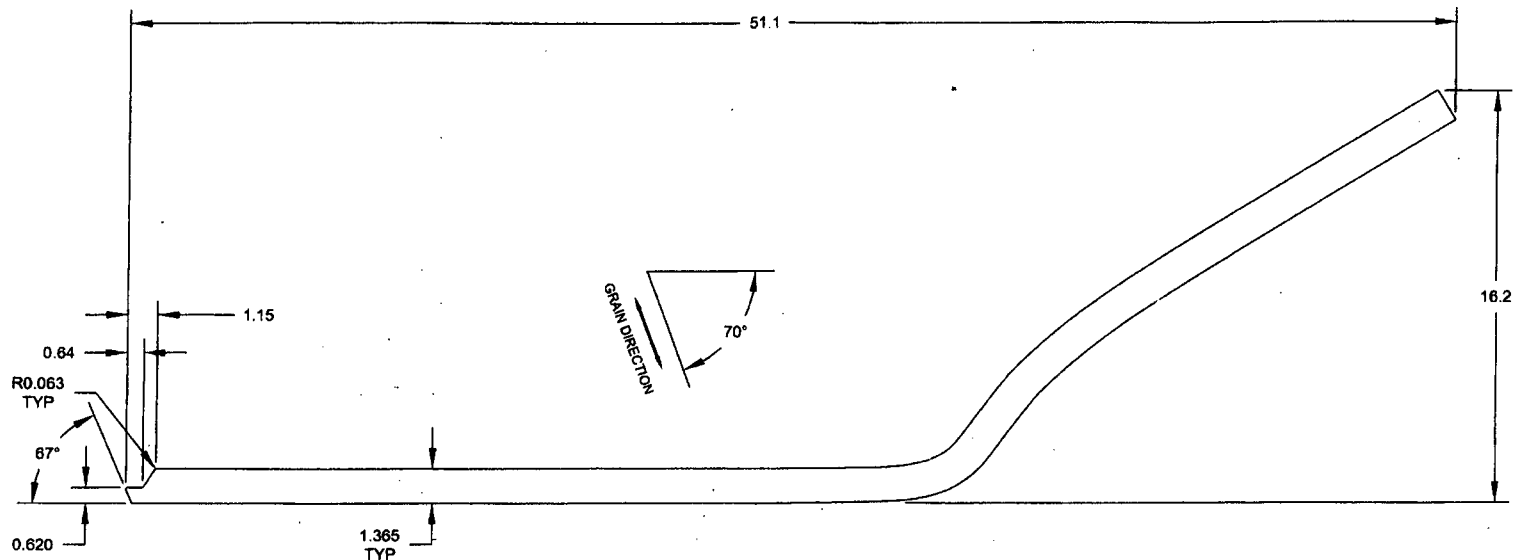
|            |          |                                                                                                                                                                                                                                                                                          |              |
|------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | 90       | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                                |              |
| DRAWN      | 90       | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                              |              |
| CHECKED    | AP       | DRAWING NO.                                                                                                                                                                                                                                                                              | REV. B       |
| MFG. APPR. | AP       | D4543                                                                                                                                                                                                                                                                                    | SHEET 4 OF 9 |
| APPROVED   | MP       | TITLE                                                                                                                                                                                                                                                                                    | SCALE        |
| DE APPR.   | JA       | RETAINER, OUTER                                                                                                                                                                                                                                                                          | NTS          |
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**D4543-3F FLAT PATTERN**



**RELEASED**  
2013-04-22  
JND

**NOTES:**

- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK  
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209  
REF DART SPEC. M6061T6S.032
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.24 lbs
- 8) PROFILE PER DRAWING FILE "D4543-3F-REVB.DXF"

|            |          |                                                                                                                                                                                                                                                                                                                         |              |
|------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | 90       | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                                                               |              |
| DRAWN      | 90       | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                                                             |              |
| CHECKED    | A.P.     | DRAWING NO.                                                                                                                                                                                                                                                                                                             | REV. B       |
| MFG. APPR. | MP       | D4543                                                                                                                                                                                                                                                                                                                   | SHEET 6 OF 9 |
| APPROVED   | MP       | TITLE                                                                                                                                                                                                                                                                                                                   | SCALE        |
| DE APPR.   | MP       | RETAINER, OUTER                                                                                                                                                                                                                                                                                                         | NTS          |
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R0.13 TYP  
REF

0.55  
REF

0.125

135°  
REF

**SECTION E-E**  
JOGGLE DETAIL  
SCALE 12X

49.6  
REF

0.683 TO CENTER  
OF JOGGLE,  
MEASURED BEFORE  
JOGGLING

JOGGLE TO INDICATED HEIGHT  
AS SHOWN IN SECTION E-E,  
CENTERED ON PART,  
USING TOOL DT9787

18.3  
REF

**D4543-5 RETAINER, LH OUTER**  
(SIDE/TOP)



**RELEASED**  
2013-04-22

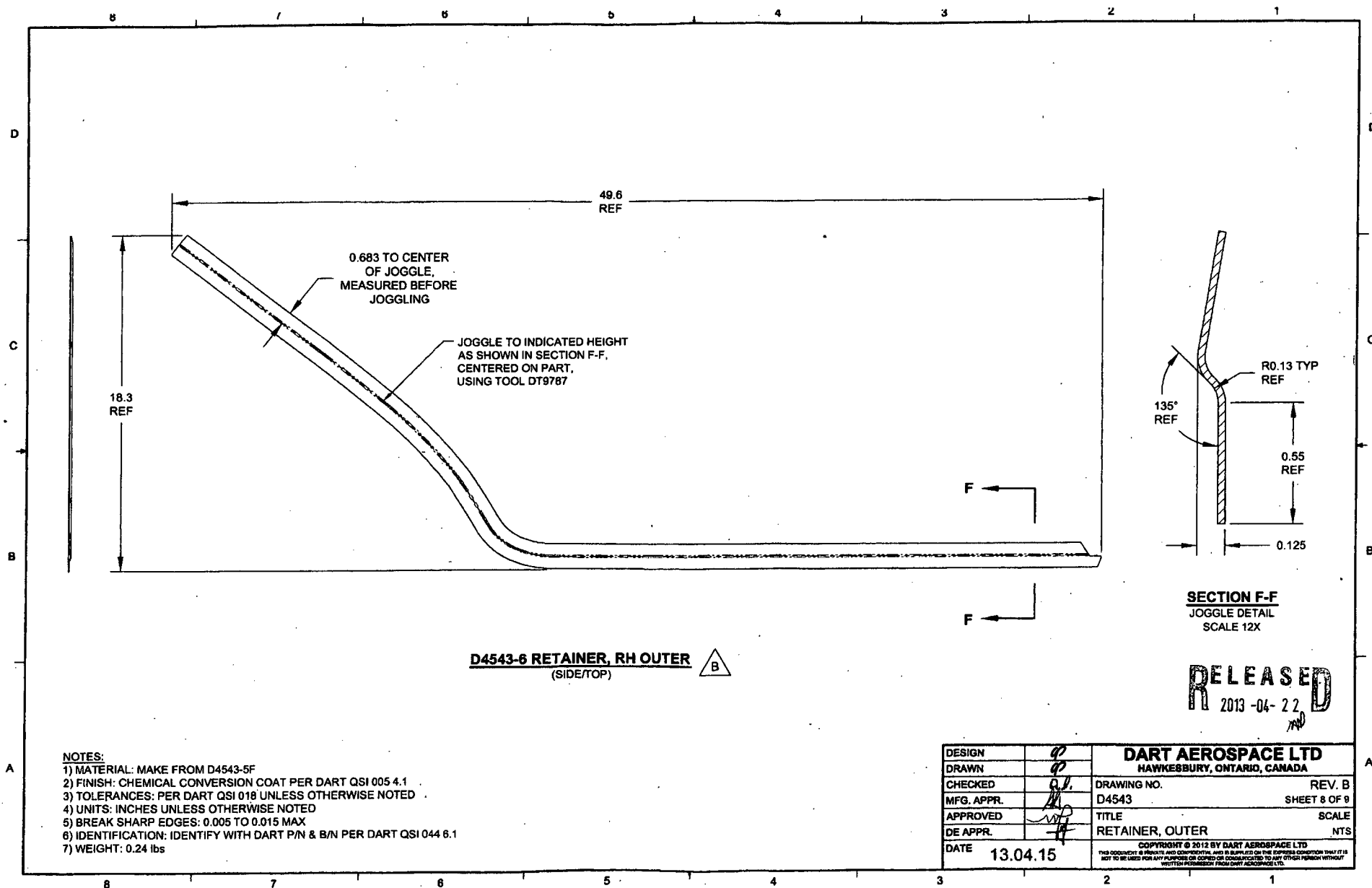
**NOTES:**

- 1) MATERIAL: MAKE FROM D4543-5F
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N & B/N PER DART QSI 044 6.1
- 7) WEIGHT: 0.24 lbs

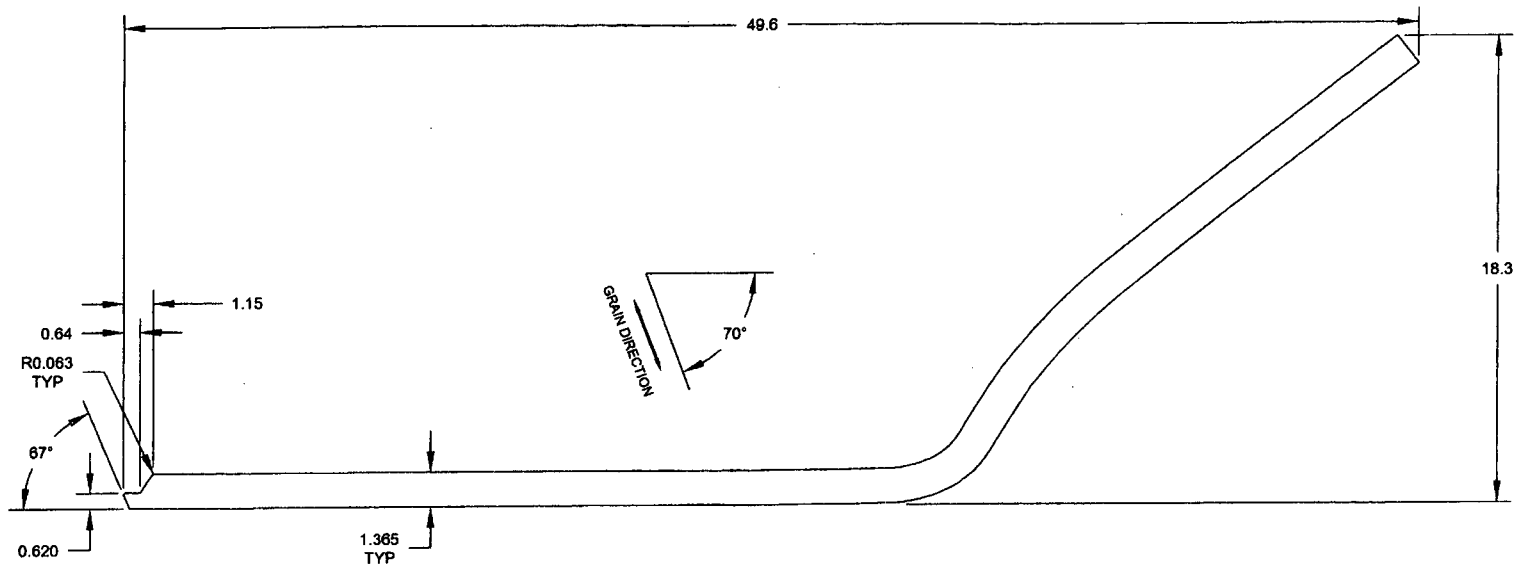
|            |          |                             |
|------------|----------|-----------------------------|
| DESIGN     |          | <b>DART AEROSPACE LTD</b>   |
| DRAWN      |          | HAWKESBURY, ONTARIO, CANADA |
| CHECKED    |          | DRAWING NO. REV. B          |
| MFG. APPR. |          | D4543 SHEET 7 OF 9          |
| APPROVED   |          | TITLE SCALE                 |
| DE APPR.   |          | RETAINER, OUTER NTS         |
| DATE       | 13.04.15 |                             |

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**D4543-5F FLAT PATTERN**



**RELEASED**  
2013-04-22

**NOTES:**

- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK  
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209  
REF DART SPEC. M8061T6S.032
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.24 lbs
- 8) PROFILE PER DRAWING FILE "D4543-5F-REV.B.DXF"

|            |          |                                        |
|------------|----------|----------------------------------------|
| DESIGN     |          | <b>DART AEROSPACE LTD</b>              |
| DRAWN      |          | HAWKESBURY, ONTARIO, CANADA            |
| CHECKED    |          | DRAWING NO. REV. B                     |
| MFG. APPR. |          | D4543 SHEET 9 OF 9                     |
| APPROVED   |          | TITLE SCALE                            |
| DE APPR.   |          | RETAINER, OUTER NTS                    |
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